



# Aviation Investigation Final Report

<b>Location:</b>	Englewood, Colorado	<b>Accident Number:</b>	DEN04CA092
<b>Date &amp; Time:</b>	June 13, 2004, 14:30 Local	<b>Registration:</b>	N2062N
<b>Aircraft:</b>	Schweizer 269C	<b>Aircraft Damage:</b>	Substantial
<b>Defining Event:</b>		<b>Injuries:</b>	2 None
<b>Flight Conducted Under:</b>	Part 91: General aviation - Personal		

## Analysis

According to the pilot, he had been cleared for operations on runway 17R. The pilot reported that after crossing the threshold at 40 knots and 40 feet agl, he "felt like [he] was in a high rate of descent and the [helicopter] began to sink." The pilot suspected he was in a "settling with power" situation and decreased the collective and pushed the cyclic forward. The helicopter continued to sink, impacting the runway hard and sliding for approximately 6 feet, substantially damaging the helicopter. Density altitude was calculated at 8,622 feet. The out of ground effect hover ceiling was calculated at approximately 5,600 feet and the in ground effect hover ceiling was calculated between 6,200 and 7,600 feet.

## Probable Cause and Findings

The National Transportation Safety Board determines the probable cause(s) of this accident to be: the settling with power situation encountered by the pilot. Contributing to the accident was the high density altitude.

## Findings

Occurrence #1: HARD LANDING  
Phase of Operation: LANDING

Findings

1. (F) WEATHER CONDITION - HIGH DENSITY ALTITUDE
2. (C) SETTLING WITH POWER - ENCOUNTERED - PILOT IN COMMAND
3. TERRAIN CONDITION - RUNWAY

## Factual Information

On June 13, 2004, at approximately 1430 mountain daylight time, a Schweizer 269C, N2062N was substantially damaged during a hard landing to runway 17R at Centennial Airport (APA), Englewood, Colorado. The private pilot and his passenger were not injured. Visual meteorological conditions prevailed. No flight plan had been filed for the personal flight being conducted under the provisions of Title 14 CFR Part 91. The flight departed Jefferson County Airport (BJC), Broomfield, Colorado, at approximately 1400.

According to the pilot's accident report, he had been cleared for take-off and landings on runway 17R. The pilot reported that after crossing the threshold at 40 knots and 40 feet agl, he "felt like [he] was in a high rate of descent and the [helicopter] began to sink." The pilot suspected he was "settling with power" and decreased the collective and pushed the cyclic forward. The helicopter continued to sink, impacting the runway hard and sliding for approximately 6 feet. After briefly assessing the damage, the pilot flew the helicopter back to BJC and landed uneventfully. Later examination revealed that the front and rear crossbar and the right tail boom support strut were bent.

Density altitude was calculated at 8,622 feet. The out of ground effect hover ceiling was calculated at approximately 5,600 feet and the in ground effect hover ceiling was calculated between 6,200 and 7,600 feet. Airport elevation is 5,883 feet msl.

### Pilot Information

<b>Certificate:</b>	Private	<b>Age:</b>	36, Male
<b>Airplane Rating(s):</b>	None	<b>Seat Occupied:</b>	Left
<b>Other Aircraft Rating(s):</b>	Helicopter	<b>Restraint Used:</b>	
<b>Instrument Rating(s):</b>	None	<b>Second Pilot Present:</b>	No
<b>Instructor Rating(s):</b>	None	<b>Toxicology Performed:</b>	No
<b>Medical Certification:</b>	Class 3 Valid Medical--no waivers/lim.	<b>Last FAA Medical Exam:</b>	May 3, 2003
<b>Occupational Pilot:</b>	UNK	<b>Last Flight Review or Equivalent:</b>	January 23, 2004
<b>Flight Time:</b>	139 hours (Total, all aircraft), 92 hours (Total, this make and model), 80 hours (Pilot In Command, all aircraft), 43 hours (Last 90 days, all aircraft), 15 hours (Last 30 days, all aircraft), 1 hours (Last 24 hours, all aircraft)		

## Aircraft and Owner/Operator Information

<b>Aircraft Make:</b>	Schweizer	<b>Registration:</b>	N2062N
<b>Model/Series:</b>	269C	<b>Aircraft Category:</b>	Helicopter
<b>Year of Manufacture:</b>		<b>Amateur Built:</b>	
<b>Airworthiness Certificate:</b>	Normal	<b>Serial Number:</b>	S1830
<b>Landing Gear Type:</b>	Skid	<b>Seats:</b>	3
<b>Date/Type of Last Inspection:</b>	May 12, 2004 100 hour	<b>Certified Max Gross Wt.:</b>	2050 lbs
<b>Time Since Last Inspection:</b>	62 Hrs	<b>Engines:</b>	1 Reciprocating
<b>Airframe Total Time:</b>	1991 Hrs at time of accident	<b>Engine Manufacturer:</b>	Lycoming
<b>ELT:</b>	Not installed	<b>Engine Model/Series:</b>	H10-360-D1A
<b>Registered Owner:</b>	On file	<b>Rated Power:</b>	205 Horsepower
<b>Operator:</b>	On file	<b>Operating Certificate(s) Held:</b>	None

## Meteorological Information and Flight Plan

<b>Conditions at Accident Site:</b>	Visual (VMC)	<b>Condition of Light:</b>	Day
<b>Observation Facility, Elevation:</b>	APA,5883 ft msl	<b>Distance from Accident Site:</b>	1 Nautical Miles
<b>Observation Time:</b>	16:53 Local	<b>Direction from Accident Site:</b>	1°
<b>Lowest Cloud Condition:</b>	Few / 8000 ft AGL	<b>Visibility</b>	10 miles
<b>Lowest Ceiling:</b>	None	<b>Visibility (RVR):</b>	
<b>Wind Speed/Gusts:</b>	11 knots / 14 knots	<b>Turbulence Type Forecast/Actual:</b>	/
<b>Wind Direction:</b>	120°	<b>Turbulence Severity Forecast/Actual:</b>	/
<b>Altimeter Setting:</b>	30.02 inches Hg	<b>Temperature/Dew Point:</b>	28°C / 1°C
<b>Precipitation and Obscuration:</b>	No Obscuration; No Precipitation		
<b>Departure Point:</b>	DENVER, CO (BJC )	<b>Type of Flight Plan Filed:</b>	None
<b>Destination:</b>	DENVER, CO (BJC )	<b>Type of Clearance:</b>	VFR
<b>Departure Time:</b>	14:00 Local	<b>Type of Airspace:</b>	Class D

## Airport Information

<b>Airport:</b>	CENTENNIAL APA	<b>Runway Surface Type:</b>	Asphalt
<b>Airport Elevation:</b>	5883 ft msl	<b>Runway Surface Condition:</b>	Dry
<b>Runway Used:</b>	17R	<b>IFR Approach:</b>	None
<b>Runway Length/Width:</b>	10002 ft / 100 ft	<b>VFR Approach/Landing:</b>	Touch and go

## Wreckage and Impact Information

<b>Crew Injuries:</b>	1 None	<b>Aircraft Damage:</b>	Substantial
<b>Passenger Injuries:</b>	1 None	<b>Aircraft Fire:</b>	None
<b>Ground Injuries:</b>	N/A	<b>Aircraft Explosion:</b>	None
<b>Total Injuries:</b>	2 None	<b>Latitude, Longitude:</b>	39.569999,-104.849998

## Administrative Information

<b>Investigator In Charge (IIC):</b>	Scott, Arnold
<b>Additional Participating Persons:</b>	Steve Scully; FAA FSDO; Denver, CO
<b>Original Publish Date:</b>	September 1, 2004
<b>Last Revision Date:</b>	
<b>Investigation Class:</b>	<a href="#">Class</a>
<b>Note:</b>	This accident report documents the factual circumstances of this accident as described to the NTSB.
<b>Investigation Docket:</b>	<a href="https://data.nts.gov/Docket?ProjectID=59468">https://data.nts.gov/Docket?ProjectID=59468</a>

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